OM protein - nucleic search, using frame_plus p2n model January 14, 2003, 03:05:54; Search time 4433 Seconds Run on: (without alignments) 3932.457 Million cell updates/sec US-09-846-589A-10 Title: Perfect score: 599 1 TLPCLLSTTPLSPPPPPPQI......MDEPSGTVWRPCEPERSEES 599 Sequence: Scoring table: OLIGO Xgapop 60.0 , Xgapext 60.0 Ygapop 60.0 , Ygapext 60.0 Fgapop 6.0, Fgapext 7.0 7.0 Delop 6.0 , Delext 2054640 seqs, 14551402878 residues Searched: Word size: 1 Total number of hits satisfying chosen parameters: 4106490 Minimum DB seq length: 0 Maximum DB seq length: 2000000000 Post-processing: Listing first 45 summaries Command line parameters: -MODEL=frame+ p2n.model -DEV=x1h Q=/cgn2 1/USPTO spool/US09846589/runat_13012003_094912_7742/app_query.fasta_1.77 -DB=GenEmbl -QFMT=fastap -SUFFIX=olip2n.rge -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=oligo -TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR_SCORE=quality -THR_MIN=1 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM-ext -HEAPSIZE-500 -MINLEN-0 -MAXLEN-2000000000 -USER=US09846589_@CGN_1_1_1879_@runat_13012003_094912_7742 -NCPU=6 -ICPU=3 -NO XLPXY -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -LONGLOG -DEV_TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6 -FGAPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7 Seg Slarch Summary for Seg 10 (amino acid against DNA) (Oligo) GenEmbl: * Database : 1: gb ba:* 2: gb_htg:* 3: gb_in:* 4: gb om:* 5: gb ov:* 6: gb pat:* 7: gb_ph:* 8: gb_pl:* 9: gb_pr:*

* missing search in Issued Patents
but sufficient overlap whother searches ~ or

10: gb_ro:*

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11: gb sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*
15: em ba:*
16: em fun:*
17: em hum:*
18: em in:*
    em mu:*
19:
20:
     em_om:*
21:
     em_or:*
22:
    em_ov:*
    em_pat:*
23:
24:
    em_ph:*
25: em_pl:*
26:
     em ro:*
     em_sts:*
27:
28: em_un:*
29: em_vi:*
30: em htg hum:*
31: em_htg_inv:*
32: em_htg_other:*
     em htg_mus:*
33:
     em_htg_pln:*
34:
35:
     em htg rod:*
36:
     em_htg_mam:*
     em htg vrt:*
37:
38:
     em sy:*
     em_htgo_hum: *
39:
     em htgo mus:*
40:
     em_htgo_other:*
41:
```

| Resi | ılt No. | Score | % Query Match | Length | DB | ID | Description |
|------|------------|-------|---------------------|--------|----|-----------|--------------------|
| | 1 | 599 | 100.0 | 2085 | 6 | AR160636 | AR160636 Sequence |
| | 2 | 76 | 12.7 | 1957 | 6 | AR160637 | AR160637 Sequence |
| | 3 | 62 | 10.4 | 142373 | 2 | AC122149 | AC122149 Oryza sat |
| | 4 | 23 | 3.8 | 150347 | 2 | AC027038 | AC027038 Oryza sat |
| | 5 | 20 | 3.3 | 299350 | 1 | SME591786 | AL591786 Sinorhizo |
| | 6 | 19 | 3.2 | 1513 | 8 | AY051059 | AY051059 Arabidops |
| | 7 | 19 | 3.2 | 1867 | 8 | AF370143 | AF370143 Arabidops |
| С | 8 | 19 | 3.2 | 4933 | 1 | ABIPDC | X99587 A.brasilens |
| | 9 | 19 | 3.2 | 11470 | 1 | AE012332 | AE012332 Xanthomon |
| С | 10 | 19 | 3.2 | 11570 | 1 | AE003937 | AE003937 Xylella f |
| | 11 | 19 | 3.2 | 82594 | 8 | AC005311 | AC005311 Arabidops |
| С | 12 | 19 | 3.2 | 84872 | 8 | AC006593 | AC006593 Arabidops |
| | 13 | 19 | 3.2 | 346547 | 1 | AP003012 | AP003012 Mesorhizo |
| | 14 | 18 | 3.0 | 12325 | 1 | AE001076 | AE001076 Archaeogl |
| | 15 | 17 | 2.8 | 11368 | 1 | AE011872 | AE011872 Xanthomon |
| | 16 | 15 | 2.5 | 1124 | 3 | PFA10B | J03986 P.falciparu |

OM protein - nucleic search, using frame_plus_p2n model

Run on: January 14, 2003, 02:29:20; Search time 337 Seconds

(without alignments)

4002.810 Million cell updates/sec

Title: US-09-846-589A-10

Perfect score: 599

Sequence: 1 TLPCLLSTTPLSPPPPPPQI......MDEPSGTVWRPCEPERSEES 599

Scoring table: OLIGO

Xgapop 60.0 , Xgapext 60.0 Ygapop 60.0 , Ygapext 60.0 Fgapop 6.0 , Fgapext 7.0 Delop 6.0 , Delext 7.0

Searched: 2185239 seqs, 1125999159 residues

Word size: 1

Total number of hits satisfying chosen parameters: 4368727

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Listing first 45 summaries

Command line parameters:

-MODEL=frame+ p2n.model -DEV=x1h

Q=/cgn2_1/USPTO_spool/US09846589/runat_13012003_094910_7714/app_query.fasta_1.77

-DB=N Geneseq_101002 -QFMT=fastap -SUFFIX=olip2n.rng -MINMATCH=0.1 -LOOPCL=0

-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=oligo -TRANS=human40.cdi

-LIST=45 -DOCALIGN=200 -THR_SCORE=quality -THR_MIN=1 -ALIGN=15 -MODE=LOCAL

-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000

-USER=US09846589_@CGN_1_1_0_@runat_13012003_094910 7714 -NCPU=6 -ICPU=3

-NO_XLPXY -NO_MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -LONGLOG -DEV TIMEOUT=120

-WARN TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6 -FGAPEXT=7

-YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7

Database: N Geneseq 101002:*

1: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1980.DAT:*

2: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

3: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1982.DAT:*

4: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1983.DAT:*

5: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1984.DAT:*

6: /SIDS2/gcgdata/geneseg/genesegn-embl/NA1985.DAT:*

7: /SIDS2/gcgdata/geneseg/genesegn-embl/NA1986.DAT:*

8: /SIDS2/gcqdata/geneseq/geneseqn-embl/NA1987.DAT:*

9: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1988.DAT:*

10: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1989.DAT:*

11: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1990.DAT:*

```
12: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*
13: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1992.DAT:*
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1993.DAT:*
14:
15: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1994.DAT:*
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1995.DAT:*
16:
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1996.DAT:*
17:
18: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1997.DAT:*
19: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1998.DAT:*
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    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2001A.DAT:*
22:
     /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*
23:
     /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2002.DAT:*
```

SUMMARIES

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| Res | ult No. | Score | Query Match | Length | DB | ID | Description |
|-----|------------|-------|----------------|--------|----|----------|--------------------|
| | 1 | 599 | 100.0 | 2085 | 22 | AAD07973 | Corn cysteinyl-tRN |
| | 2 | 76 | 12.7 | 1957 | 22 | AAD07974 | Rice cysteinyl-tRN |
| | 3 | 41 | 6.8 | 294 | 24 | ABL72570 | Corn tassel-derive |
| | 4 | 15 | 2.5 | 1142 | 21 | AAC41815 | Arabidopsis thalia |
| | 5 | 14 | 2.3 | 2183 | 22 | AAD07975 | Soybean cysteinyl- |
| | 6 | 14 | 2.3 | 10620 | 23 | ABL17327 | Drosophila melanog |
| | 7 | 14 | 2.3 | 12748 | 23 | ABL17326 | Drosophila melanog |
| С | 8 | 13 | 2.2 | 949 | 12 | AAQ10542 | E.coli peptidyl-pr |
| С | 9 | 13 | 2.2 | 949 | 16 | AAQ86973 | Clone contg. E. co |
| С | 10 | 13 | 2.2 | 949 | 16 | AAQ86966 | Clone contg. E. co |
| | 11 | 13 | 2.2 | 92407 | 22 | AAF28549 | Genomic fragment # |
| С | 12 | 13 | 2.2 | 92934 | 21 | AAA81473 | N. meningitidis pa |
| С | 13 | 13 | 2.2 | 172325 | 21 | AAF21613 | Neisseria meningit |
| | 14 | 13 | 2.2 | 349980 | 22 | AAH41226 | Pyrococcus abyssi |
| С | 15 | 13 | 2.2 | 837096 | 21 | AAA81489 | N. meningitidis pa |
| | 16 | 12 | 2.0 | 749 | 24 | ABK78323 | Bacillus clausii g |
| | 17 | 12 | 2.0 | 1117 | 21 | AAC97316 | Helicobacter pylor |
| | 18 | 12 | 2.0 | 1398 | 18 | AAV25143 | H. pylori cytoplas |
| | 19 | 12 | 2.0 | 1399 | 24 | ABK73872 | Bacillus lichenifo |
| | 20 | 12 | 2.0 | 2068 | | AAC77671 | Human cancer assoc |
| | 21 | 12 | 2.0 | 2426 | 23 | ABL10423 | Drosophila melanog |
| | 22 | 12 | 2.0 | 2535 | | AAS45013 | cDNA encoding nove |
| | 23 | 12 | 2.0 | 2536 | 21 | AAZ51261 | Human RNA-associat |
| | 24 | 12 | 2.0 | 2540 | 24 | ABK51340 | cDNA encoding huma |
| | 25 | . 12 | 2.0 | 2555 | 22 | AAS45201 | cDNA encoding nove |
| | 26 | 12 | 2.0 | 2711 | 23 | ABV22217 | Human prostate exp |
| | 27 | 12 | 2.0 | 4353 | | | DNA encoding novel |
| | 28 | 12 | 2.0 | 4381 | | | DNA encoding novel |
| С | 29 | 12 | 2.0 | 4733 | | | Drosophila melanog |
| | 30 | 12 | 2.0 | 19407 | | | Human nervous syst |
| | 31 | 12 | 2.0 | 19407 | | | Human immune/haema |
| | 32 | 11 | 1.8 | 1212 | | | C glutamicum codin |
| | 33 | 11 | 1.8 | 1416 | | | Listeria monocytog |
| | 34 | 11 | 1.8 | 1605 | 24 | ABQ69120 | Listeria monocytog |

OM protein - nucleic search, using frame plus p2n model January 14, 2003, 04:51:01; Search time 294 Seconds Run on: (without alignments) 896.673 Million cell updates/sec US-09-846-589A-10 Title: Perfect score: 599 1 TLPCLLSTTPLSPPPPPPQI......MDEPSGTVWRPCEPERSEES 599 Sequence: Scoring table: OLIGO Xgapop 60.0 , Xgapext 60.0 Ygapop 60.0 , Ygapext 60.0 Fgapop 6.0 , Fgapext Delop 6.0 , Delext 7.0 389086 segs, 220051671 residues Searched: Word size: 1 Total number of hits satisfying chosen parameters: 777091 Minimum DB seq length: 0 Maximum DB seq length: 2000000000 Post-processing: Listing first 45 summaries Command line parameters: -MODEL=frame+ p2n.model -DEV=xlh Q=/cgn2 1/USPTO spool/US09846589/runat 13012003 094913 7779/app query.fasta 1.77 -DB=Published_Applications NA -QFMT=fastap -SUFFIX=olip2n.rnpb -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=oligo -TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=quality -THR MIN=1 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000 -USER=US09846589 @CGN 1 1 28 @runat 13012003 094913 7779 -NCPU=6 -ICPU=3 -NO XLPXY -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -LONGLOG -DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6 -FGAPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7 Database : Published Applications NA:* 1: /cgn2 6/ptodata/1/pubpna/US07 PUBCOMB.seq:* /cgn2 6/ptodata/1/pubpna/PCT NEW PUB.seq:* 3: /cgn2 6/ptodata/1/pubpna/US06 NEW PUB.seq:* 4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:* 5: /cgn2_6/ptodata/1/pubpna/US07_NEW PUB.seq:* /cgn2_6/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:* /cgn2 6/ptodata/1/pubpna/US08 NEW PUB.seq:* 8: /cgn2 6/ptodata/1/pubpna/US08 PUBCOMB.seq:*

9: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
10: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*

12: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*

14: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| _ | 1. | | 8 | | | | |
|------|----------|---------|------------|--------------|----------|---|--|
| Resu | | Score | Query | Length I | פר | ID | Description |
| | 10. | 2001e | | Length : | | | |
| | 1 | 81 | 13.5 | 249 | 10 | US-09-923-876-1857 | Sequence 1857, Ap |
| | 2 | 41 | 6.8 | 294 | 10 | US-09-294-093B-1944 | Sequence 1944, Ap |
| | 3 | 12 | 2.0 | . 366 | 10 | US-09-960-352-2926 | Sequence 2926, Ap |
| | 4 | 12 | 2.0 | 749 | 10 | US-09-974-300-5614 | Sequence 5614, Ap |
| | 5 | 12 | 2.0 | 1399 | 10 | US-09-974-300-1163 | Sequence 1163, Ap |
| | 6 | 12 | 2.0 | 2068 | 10 | US-09-925-301-65 | Sequence 65, Appl |
| | 7 | 11 | 1.8 | 1212 | 9 | US-09-738-626-1670 | Sequence 1670, Ap |
| С | 8 | 11 | | 640681 | 10 | US-09-790-988-1 | Sequence 1, Appli |
| С | 9 | 11 | 1.8 | 3309400 | 9 | US-09-738-626-1 | Sequence 1, Appli |
| С | 10 | 10 | 1.7 | 181 | 10 | US-09-815-242-3450 | Sequence 3450, Ap |
| | 11 | 10 | 1.7 | 671 | 10 | US-09-764-853-106 | Sequence 106, App |
| | 12 | 10 | 1.7 | 1399 | 10 | US-09-815-242-4732 | Sequence 4732, Ap Sequence 74, Appl |
| С | 13 | 10 | 1.7 | 10636 | 10 | US-09-070-927A-74 US-09-764-853-899 | Sequence 899, App |
| ~ | 14 15 | 10 9 | 1.7 1.5 | 11950 100 | 10 10 | US-09-969-373-1505 | Sequence 1505, App |
| С | 16 | 9 | 1.5 | 248 | 10 | US-09-960-352-277 | Sequence 277, App |
| | 17 | 9 | 1.5 | 463 | 10 | US-09-864-761-5509 | Sequence 5509, Ap |
| С | 18 | 9 | 1.5 | 479 | 10 | US-09-864-761-768 | Sequence 768, App |
| C | 19 | 9 | 1.5 | 489 | 10 | US-09-244-694-153 | Sequence 153, App |
| | 20 | 9 | 1.5 | 496 | 9 | US-09-728-444-245 | Sequence 245, App |
| | 21 | 9 | 1.5 | 531 | 10 | US-09-864-761-22281 | Sequence 22281, A |
| | 22 | 9 | 1.5 | 560 | 10 | US-09-728-446-940 | Sequence 940, App |
| С | 23 | 9 | 1.5 | 581 | 10 | US-09-822-849A-31 | Sequence 31, Appl |
| C | 24 | 9 | 1.5 | 830 | 10 | US-09-864-761-19531 | Sequence 19531, A |
| | 25 | 9 | 1.5 | 1380 | 9 | US-09-738-626-2903 | Sequence 2903, Ap |
| C | 26 | 9 | 1.5 | 15295 | 10 | US-09-764-877-3404 | Sequence 3404, Ap |
| | 27 | 9 | 1.5 | 42999 | 9 | US-09-799-462A-17 | Sequence 17, Appl |
| | 28 | 9 | 1.5 | 42999 | 9 | US-10-125-767-17 | Sequence 17, Appl |
| С | 29 | 9 | 1.5 | 62944 | 10 | US-09-954-456-2257 | Sequence 2257, Ap |
| С | 30 | 9 | 1.5 | 126512 | 10 | US-09-804-474A-3 | Sequence 3, Appli |
| | 31 | 8 | 1.3 | 96 | 10 | US-09-969-373-1233 | Sequence 1233, Ap |
| | 32 | 8 | 1.3 | 108 | 10 | US-09-969-373-1232 | Sequence 1232, Ap Sequence 461, App |
| | 33 34 | 8 8 | 1.3 1.3 | 154 237 | 10 10 | US-09-770-696-461 US-09-783-590-5502 | Sequence 5502, Ap |
| | 35 | 8 | 1.3 | 256 | 10 | US-09-764-878-337 | Sequence 337, App |
| | 36 | 8 | 1.3 | 261 | 10 | US-09-864-761-17114 | Sequence 17114, A |
| | 37 | 8 | 1.3 | 284 | 10 | US-09-783-590-3447 | Sequence 3447, Ap |
| С | 38 | 8 | 1.3 | 287 | 10 | US-09-864-761-22823 | Sequence 22823, A |
| - | 39 | 8 | 1.3 | | 10 | US-09-864-761-23550 | Sequence 23550, A |
| | 40 | 8 | 1.3 | 322 | 10 | US-09-833-381-1444 | Sequence 1444, Ap |
| С | 41 | 8 | 1.3 | 341 | 10 | US-09-920-300A-1410 | Sequence 1410, Ap |
| С | 42 | 8 | 1.3 | 341 | 12 | US-10-033-528-1410 | Sequence 1410, Ap |
| С | 43 | 8 | 1.3 | 366 | 10 | | Sequence 4418, Ap |
| С | 44 | 8 | 1.3 | 373 | 10 | US-09-864-761-11275 | Sequence 11275, A |

OM protein - nucleic search, using frame_plus_p2n model

Run on: January 14, 2003, 03:46:08; Search time 2318 Seconds

(without alignments)

4185.115 Million cell updates/sec

Title: US-09-846-589A-10

Perfect score: 599

Sequence: 1 TLPCLLSTTPLSPPPPPPQI......MDEPSGTVWRPCEPERSEES 599

Scoring table: OLIGO

Xgapop 60.0 , Xgapext 60.0 Ygapop 60.0 , Ygapext 60.0 Fgapop 6.0 , Fgapext 7.0 Delop 6.0 , Delext 7.0

Searched: 16154066 seqs, 8097743376 residues

Word size:

Total number of hits satisfying chosen parameters: 32308016

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Listing first 45 summaries

Command line parameters:

-MODEL=frame+ p2n.model -DEV=xlh

Q=/cgn2_1/USPTO_spool/US09846589/runat_13012003_094912_7752/app_query.fasta_1.77

-DB=EST -QFMT=fastap -SUFFIX=olip2n.rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0

-UNITS=bits -START=1 -END=-1 -MATRIX=oligo -TRANS=human40.cdi -LIST=45

-DOCALIGN=200 -THR_SCORE=quality -THR_MIN=1 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto

-NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000

-USER=US09846589_@CGN_1_1_887_@runat_13012003_094912_7752 -NCPU=6 -ICPU=3

-NO XLPXY -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -LONGLOG -DEV_TIMEOUT=120

-WARN TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6 -FGAPEXT=7

-YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7

Database : EST:*

1: em estba:*

2: em esthum:*

3: em_estin:*

4: em_estmu:*

5: em_estov:*

6: em_estpl:*

7: em_estro:*

8: em htc:*

9: gb est1:*

10: gb est2:*

11: gb htc:*

```
12: gb est3:*
13: gb_est4:*
14: gb_est5:*
15: em_estfun:*
16: em_estom:*
17: gb_gss:*
18: em_gss_hum:*
19: em gss_inv:*
20: em_gss_pln:*
21: em_gss_vrt:*
22: em gss fun:*
23: em_gss_mam:*
24: em_gss_mus:*
25: em_gss_other:*
26: em_gss_pro:*
27: em_gss_rod:*
```

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| Res | ult No. | Score | Query Match | Length | DB | ID | Description |
|-----|------------|-------|----------------|--------|----|----------|--------------------|
| | | | | | | | |
| | 1 | 599 | 100.0 | 2120 | 11 | AY104190 | AY104190 Zea mays |
| | 2 | 168 | 28.0 | 581 | 10 | AW065368 | AW065368 614048G07 |
| | 3 | 161 | 26.9 | 548 | 13 | BM498016 | BM498016 952021B05 |
| | 4 | 155 | 25.9 | 624 | 10 | AW065367 | AW065367 614048G06 |
| | 5 | 146 | 24.4 | 522 | 13 | BM428660 | BM428660 952021B05 |
| | 6 | 141 | 23.5 | 636 | 10 | AW065483 | AW065483 614058H08 |
| | 7 | 135 | 22.5 | 451 | 13 | BM498280 | BM498280 952021B05 |
| | 8 | 135 | 22.5 | 588 | 10 | AW497943 | AW497943 660042A12 |
| С | 9 | 128 | 21.4 | 577 | 10 | AW000193 | AW000193 614058H08 |
| С | 10 | 118 | 19.7 | 470 | 9 | AI947463 | AI947463 614048G07 |
| | 11 | 118 | 19.7 | 478 | 14 | BQ667879 | BQ667879 946101G05 |
| С | 12 | 117 | 19.5 | 548 | 14 | BQ667878 | BQ667878 946101G05 |
| | 13 | 117 | 19.5 | 586 | 10 | AW563004 | AW563004 660070H04 |
| С | 14 | 97 | 16.2 | 604 | 9 | AI746204 | AI746204 605082F05 |
| | 15 | 94 | 15.7 | 393 | 14 | BQ778947 | BQ778947 946115G02 |
| С | 16 | 83 | 13.9 | 594 | 10 | AW600543 | AW600543 660070H04 |
| | 17 | 73 | 12.2 | 508 | 9 | AI649625 | AI649625 486068G03 |
| С | 18 | 66 | 11.0 | 504 | 10 | AW498128 | AW498128 660042A12 |
| | 19 | 57 | 9.5 | 412 | 14 | BQ282680 | BQ282680 WHE3080 D |
| | 20 | 57 | 9.5 | 547 | 10 | BE593605 | BE593605 WS1_98_F1 |
| С | 21 | 55 | 9.2 | 327 | 9 | AI939893 | AI939893 618026C01 |
| | 22 | 52 | 8.7 | 584 | 14 | BQ294221 | BQ294221 1091026H1 |
| | 23 | 51 | 8.5 | 535 | 12 | BG411263 | BG411263 EM1_27_F0 |
| | 24 | 51 | 8.5 | 647 | 10 | BE593197 | BE593197 WS1_98_F1 |
| С | 25 | 49 | 8.2 | 615 | 9 | AI622640 | AI622640 486105A09 |
| | 26 | 47 | 7.8 | 609 | 10 | AV833385 | AV833385 AV833385 |
| | 27 | 47 | 7.8 | 614 | 13 | BM135900 | BM135900 WHE2619_H |
| | 28 | 41 | 6.8 | 500 | 14 | BQ839424 | BQ839424 WHE4165_H |
| | 29 | 41 | 6.8 | 502 | 10 | BE497913 | BE497913 WHE0958_G |
| | 30 | 41 | 6.8 | 598 | 10 | BE499567 | BE499567 WHE0962_H |
| | 31 | 41 | 6.8 | 653 | 14 | BQ838563 | BQ838563 WHE2912_A |

OM protein - nucleic search, using frame_plus_p2n model

January 14, 2003, 00:41:52; Search time 4459 Seconds Run on:

(without alignments)

3909.527 Million cell updates/sec

US-09-846-589A-10 Title:

3138 Perfect score:

1 TLPCLLSTTPLSPPPPPPQI......MDEPSGTVWRPCEPERSEES 599 Sequence:

BLOSUM62 Scoring table:

> Xgapop 10.0 , Xgapext Ygapop 10.0 , Ygapext 0.5 Fgapop 6.0 , Fgapext 7.0 7.0 6.0 , Delext Delop

2054640 seqs, 14551402878 residues Searched:

4109280 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Command line parameters:

-MODEL=frame+_p2n.model -DEV=xlh

Q=/cgn2 1/USPTO spool/US09846589/runat_13012003_094837_7387/app_query.fasta_1.77

-DB=GenEmbl -QFMT=fastap -SUFFIX=p2n.rge -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0

-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45

-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL

-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000

-USER=US09846589_@CGN_1_1_1879_@runat_13012003_094837_7387 -NCPU=6 -ICPU=3

-NO XLPXY -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -LONGLOG -DEV_TIMEOUT=120

-WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6 -FGAPEXT=7

-YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

GenEmbl: * Database :

1: gb ba:*

2: gb_htg:*

3: gb in:*

4: qb om:*

5: gb_ov:*

6: gb_pat:*

7: gb_ph:*

8: gb_pl:*

9: gb_pr:* 10: gb ro:*

Sey Search Summary for Seg 10 (amino acid against DNA (amino acid against DNA databases)

```
11: gb_sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*
15: em ba:*
16: em fun:*
17: em hum:*
18: em in:*
19: em mu:*
20:
    em om:*
21: em_or:*
22: em_ov:*
23: em_pat:*
24:
    em_ph:*
25:
    em_pl:*
    em ro:*
26:
27:
    em sts:*
28:
    em_un:*
29:
    em_vi:*
30: em_htg_hum:*
31: em htg inv:*
32: em htg other:*
33: em htg mus:*
34: em htg pln:*
35:
    em htg rod:*
36:
     em_htg_mam:*
37:
     em_htg_vrt:*
38:
     em sy:*
39:
     em htgo hum:*
     em_htgo_mus:*
40:
41:
     em_htgo_other:*
```

| Result No. | Score | % Query Match | Length | DB | ID | Description |
|--|--|---|---|------------------------------------|--|--|
| 1 2 3 4 5 6 7 8 c 10 11 12 13 14 c 15 | 3138 2398 1934.5 1585.5 1536 1517 1470 1150 1142 1142 1033.5 1014 1014 1013 | 100.0 76.4 61.6 50.5 48.9 48.3 46.8 36.6 36.4 32.9 32.3 32.3 32.3 | 2085 1957 142373 150347 1867 1513 2183 82594 84872 71736 99492 11615 10020 262278 233000 10461 | DB 6 6 2 2 8 8 6 8 8 8 1 1 1 1 1 1 | AR160636 AR160637 AC122149 AC027038 AF370143 AY051059 AR160638 AC005311 AC006593 AB009048 ATF18021 AE010214 AE005233 AP002552 AP000003 U32693 | AR160636 Sequence AR160637 Sequence AC122149 Oryza sat AC027038 Oryza sat AF370143 Arabidops AY051059 Arabidops AR160638 Sequence AC005311 Arabidops AC006593 Arabidops AC006593 Arabidops AB009048 Arabidops AB163763 Arabidops AL163763 Arabidops AE010214 Pyrococcu AE005233 Escherich AP002552 Escherich AP000003 Pyrococcu U32693 Haemophilus |
| c 16 | 1012 | 52.2 | 10101 | _ | 002000 | OSSOSO MACMOPHITAD |

OM protein - nucleic search, using frame_plus_p2n model

Run on: January 13, 2003, 22:31:52; Search time 337 Seconds

(without alignments)

4002.810 Million cell updates/sec

Title: US-09-846-589A-10

Perfect score: 3138

Sequence: 1 TLPCLLSTTPLSPPPPPPQI......MDEPSGTVWRPCEPERSEES 599

Scoring table: BLOSUM62

Xgapop 10.0 , Xgapext 0.5 Ygapop 10.0 , Ygapext 0.5 Fgapop 6.0 , Fgapext 7.0 Delop 6.0 , Delext 7.0

Searched: 2185239 seqs, 1125999159 residues

Total number of hits satisfying chosen parameters: 4370478

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Command line parameters:

-MODEL=frame+_p2n.model -DEV=x1h

Q=/cgn2_1/USPTO_spool/US09846589/runat_13012003_094836_7369/app_query.fasta_1.77

-DB=N Geneseq 101002 -QFMT=fastap -SUFFIX=p2n.rng -MINMATCH=0.1 -LOOPCL=0

-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi

-LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15

-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000

-USER=US09846589 @CGN 1 1 0 @runat 13012003 094836 7369 -NCPU=6 -ICPU=3

-NO XLPXY -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -LONGLOG -DEV TIMEOUT=120

-WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6 -FGAPEXT=7

-YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

Database: N Geneseq 101002:*

1: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1980.DAT:*

2: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

3: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1982.DAT:*

4: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1983.DAT:*

5: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1984.DAT:*

6: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1985.DAT:*

7: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*

8: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1987.DAT:*

9: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1988.DAT:*

10: /SIDS2/gcgdata/geneseg/genesegn-embl/NA1989.DAT:*

11: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1990.DAT:*

```
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1992.DAT:*
13:
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1993.DAT:*
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1994.DAT:*
15:
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1995.DAT:*
16:
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1996.DAT:*
18: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1997.DAT:*
19: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1998.DAT:*
20: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2000.DAT:*
21:
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2001A.DAT:*
22:
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*
23:
    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2002.DAT:*
```

| | | | ò | | | | |
|-----|-----|-------|-------|----------|----|----------|--------------------|
| Res | ult | | Query | | | | |
| | No. | Score | Match | Length I | DВ | ID | Description |
| | 1 | 3138 | 100.0 | 2085 | 22 | AAD07973 | Corn cysteinyl-tRN |
| | 2 | 2398 | 76.4 | 1957 | 22 | AAD07974 | Rice cysteinyl-tRN |
| | 3 | 1470 | 46.8 | 2183 | 22 | AAD07975 | Soybean cysteinyl- |
| | 4 | 1004 | 32.0 | 92407 | 22 | AAF28549 | Genomic fragment # |
| | 5 | 987.5 | 31.5 | 1399 | 24 | ABK73872 | Bacillus lichenifo |
| | 6 | 983 | | 349980 | 22 | AAH41226 | Pyrococcus abyssi |
| С | 7 | 975 | 31.1 | 92934 | 21 | AAA81473 | N. meningitidis pa |
| c | 8 | 975 | | 172325 | 21 | AAF21613 | Neisseria meningit |
| C | 9 | 975 | 31.1 | 837096 | 21 | AAA81489 | N. meningitidis pa |
| C | 10 | 911 | 29.0 | 10636 | 20 | AAX13011 | Enterococcus faeca |
| | 11 | 901.5 | 28.7 | 3011208 | 24 | | Listeria innocua D |
| | 12 | 888.5 | 28.3 | 1416 | 24 | ABQ68090 | Listeria monocytog |
| | 13 | 888.5 | | 1163020 | 24 | | Listeria innocua c |
| | 14 | 887.5 | | 2944528 | 24 | | Listeria monocytog |
| | 15 | 879.5 | 28.0 | 1440 | 24 | ABN91828 | Staphylococcus epi |
| С | 16 | 879.5 | 28.0 | 3242 | 22 | AAH54369 | S. epidermidis gen |
| c | 17 | 873 | 27.8 | 640681 | 24 | ABA92787 | Buchnera sp. genom |
| _ | 18 | 869 | 27.7 | 1344 | 18 | AAT97093 | Streptococcus pneu |
| С | 19 | . 863 | 27.5 | 28882 | 19 | AAV52273 | Streptococcus pneu |
| | 20 | 862.5 | 27.5 | 1401 | 18 | AAT72875 | DNA encoding cyste |
| | 21 | 862.5 | 27.5 | 1401 | 19 | AAV31108 | Staphylococcus aur |
| | 22 | 862.5 | 27.5 | 1401 | 21 | AAA39270 | Staphylococcus aur |
| | 23 | 854.5 | 27.2 | 1399 | 23 | AAS52150 | Staphylococcus aur |
| | 24 | 851 | 27.1 | 1341 | 24 | ABN66316 | Streptococcus poly |
| | 25 | 851 | 27.1 | 2155561 | 24 | ABN71527 | Streptococcus poly |
| С | 26 | 831 | 26.5 | 2365589 | 24 | ABA90521 | Genomic sequence o |
| | 27 | 830 | 26.4 | 1341 | 24 | ABN66317 | Streptococcus poly |
| | 28 | 793 | 25.3 | 2633 | 24 | ABQ70829 | Listeria monocytog |
| | 29 | 779 | 24.8 | 1380 | 22 | AAH67868 | C glutamicum codin |
| С | 30 | 779 | 24.8 | 349980 | 22 | AAH68533 | C glutamicum codin |
| | 31 | 774 | 24.7 | 1398 | 18 | AAV25143 | H. pylori cytoplas |
| С | 32 | 773 | 24.6 | 13336 | 23 | AAS59554 | Propionibacterium |
| | 33 | 770 | 24.5 | 1142 | 21 | AAC41815 | Arabidopsis thalia |
| С | 34 | 748.5 | 23.9 | 6876 | 18 | AAV74497 | Staphylococcus aur |
| | | | | | | | |

OM protein - nucleic search, using frame_plus_p2n model

Run on: January 13, 2003, 23:14:27; Search time 66 Seconds

(without alignments)

2783.324 Million cell updates/sec

Title: US-09-846-589A-10

Perfect score: 3138

Sequence: 1 TLPCLLSTTPLSPPPPPPQI......MDEPSGTVWRPCEPERSEES 599

Scoring table: BLOSUM62

Xgapop 10.0 , Xgapext 0.5 Ygapop 10.0 , Ygapext 0.5 Fgapop 6.0 , Fgapext 7.0 Delop 6.0 , Delext 7.0

Searched: 441362 seqs, 153338381 residues

Total number of hits satisfying chosen parameters: 882724

Minimum DB seg length: 0

Maximum DB seg length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Command line parameters:

-MODEL=frame+ p2n.model -DEV=xlh

Q=/cgn2_1/USPTO_spool/US09846589/runat_13012003_094836_7377/app_query.fasta_1.77

-DB=Issued Patents NA -QFMT=fastap -SUFFIX=p2n.rni -MINMATCH=0.1 -LOOPCL=0

-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi

-LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15

-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000

-USER=US09846589 @CGN_1_1_19_@runat_13012003_094836_7377 -NCPU=6 -ICPU=3

-NO_XLPXY -NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -LONGLOG -DEV_TIMEOUT=120

-WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6 -FGAPEXT=7

-YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

Database : Issued Patents NA:*

1: /cgn2 6/ptodata/1/ina/5A COMB.seq:*

2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*

3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

4: /cgn2 6/ptodata/1/ina/6B COMB.seq:*

5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

6: /cgn2 6/ptodata/1/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| | | | ક | | | | |
|-----|------|-------|-------|----------|----|---------------------|--------------------|
| Res | sult | | Query | | | | |
| | No. | Score | Match | Length [| DВ | ID | Description |
| | | | | | | | 0 7 2 1 4 |
| | 1 | 3138 | 100.0 | 2085 | 4 | US-09-352-990-9 | Sequence 9, Appli |
| | 2 | 2398 | 76.4 | 1957 | | US-09-352-990-11 | Sequence 11, Appl |
| | 3 | 1470 | 46.8 | 2183 | 4 | US-09-352-990-13 | Sequence 13, Appl |
| | 4 | 879.5 | 28.0 | 1440 | 4 | US-09-134-001C-1291 | Sequence 1291, Ap |
| | 5 | 869 | 27.7 | 1344 | 1 | US-08-844-010-1 | Sequence 1, Appli |
| | 6 | 869 | 27.7 | 1344 | 3 | US-09-012-873-1 | Sequence 1, Appli |
| С | 7 | 863 | 27.5 | 28882 | 4 | US-08-961-527-140 | Sequence 140, App |
| | 8 | 862.5 | 27.5 | 1401 | 1 | US-08-785-066-1 | Sequence 1, Appli |
| | 9 | 862.5 | 27.5 | 1401 | 3 | US-09-007-355-1 | Sequence 1, Appli |
| | 10 | 862.5 | 27.5 | 1401 | 3 | US-08-913-489-1 | Sequence 1, Appli |
| С | 11 | 745.5 | 23.8 | | 4 | US-09-103-840A-2 | Sequence 2, Appli |
| С | 12 | 745.5 | 23.8 | 4411529 | 4 | US-09-103-840A-1 | Sequence 1, Appli |
| | 13 | 722.5 | 23.0 | 1494 | 3 | US-08-898-977-1 | Sequence 1, Appli |
| | 14 | 722.5 | 23.0 | 1494 | 4 | US-09-535-171-1 | Sequence 1, Appli |
| С | 15 | 504 | 16.1 | 1360 | 4 | US-08-858-207A-65 | Sequence 65, Appl |
| | 16 | 458 | 14.6 | 2083 | 4 | US-09-221-017B-938 | Sequence 938, App |
| | 17 | 363.5 | 11.6 | 333 | 1 | US-08-844-010-3 | Sequence 3, Appli |
| | 18 | 363.5 | 11.6 | 333 | 3 | US-09-012-873-3 | Sequence 3, Appli |
| | 19 | 162.5 | 5.2 | 1983 | 4 | US-09-134-001C-513 | Sequence 513, App |
| С | 20 | 148.5 | 4.7 | 10690 | 4 | US-08-961-527-93 | Sequence 93, Appl |
| | 21 | 148 | 4.7 | 5163 | 3 | US-08-700-651-1 | Sequence 1, Appli |
| | 22 | 148 | 4.7 | 5163 | 3 | US-08-928-361B-4 | Sequence 4, Appli |
| | 23 | 148 | 4.7 | 5318 | 3 | US-08-700-651-2 | Sequence 2, Appli |
| | 24 | 148 | 4.7 | 5318 | 3 | US-08-928-361B-3 | Sequence 3, Appli |
| | 25 | 146.5 | 4.7 | 1998 | 3 | US-08-844-059-1 | Sequence 1, Appli |
| | 26 | 146.5 | 4.7 | 1998 | 4 | US-09-431-202-1 | Sequence 1, Appli |
| | 27 | 144.5 | 4.6 | | 1 | US-08-453-477-1 | Sequence 1, Appli |
| | 28 | 144.5 | 4.6 | | 1 | US-08-453-461-1 | Sequence 1, Appli |
| | 29 | 144 | 4.6 | | 4 | US-08-938-105-2 | Sequence 2, Appli |
| | 30 | 137.5 | 4.4 | 3574 | 4 | US-09-311-236-1 | Sequence 1, Appli |
| | 31 | 136.5 | 4.3 | | 4 | US-08-961-527-47 | Sequence 47, Appl |
| | 32 | 134.5 | 4.3 | | 4 | US-09-718-692-1 | Sequence 1, Appli |
| | 33 | 134.5 | 4.3 | | 4 | US-09-718-852-1 | Sequence 1, Appli |
| | 34 | 134.5 | 4.3 | | 4 | US-09-718-815-1 | Sequence 1, Appli |
| | 35 | 130 | 4.1 | | 3 | US-09-253-691-3 | Sequence 3, Appli |
| | 36 | 128 | 4.1 | 954 | 4 | US-08-098-327E-37 | Sequence 37, Appl |
| | 37 | 128 | 4.1 | | 4 | US-08-462-625-37 | Sequence 37, Appl |
| | 38 | 128 | 4.1 | | 4 | US-08-098-327E-34 | Sequence 34, Appl |
| | 39 | 128 | 4.1 | | 4 | US-08-462-625-34 | Sequence 34, Appl |
| | 40 | 126 | 4.0 | | 2 | US-08-668-128B-7 | Sequence 7, Appli |
| | 41 | 126 | 4.0 | | 2 | US-08-905-445-7 | Sequence 7, Appli |
| | 42 | 123 | 3.9 | | 4 | US-08-446-137B-1 | Sequence 1, Appli |
| | 43 | 123 | 3.9 | | 4 | US-09-643-597-117 | Sequence 117, App |
| | 44 | 122.5 | 3.9 | | 6 | 5180810-2 | Patent No. 5180810 |
| | 45 | 122.3 | 3.9 | | 4 | US-08-098-327E-32 | Sequence 32, Appl |
| | 40 | 122 | 3.9 | 950 | 4 | 00 00 000 0215 02 | bequeince 32, Appr |

ALIGNMENTS

RESULT 1 US-09-352-990-9

[;] Sequence 9, Application US/09352990

OM protein - nucleic search, using frame_plus_p2n model

January 14, 2003, 00:53:57; Search time 81 Seconds Run on:

(without alignments)

3254.591 Million cell updates/sec

Title: US-09-846-589A-10

Perfect score: 3138

1 TLPCLLSTTPLSPPPPPPQI......MDEPSGTVWRPCEPERSEES 599 Sequence:

Scoring table: BLOSUM62

Xgapop 10.0 , Xgapext 0.5 Ygapop 10.0 , Ygapext 0.5 7.0 Fgapop 6.0 , Fgapext 6.0 , Delext Delop

389086 segs, 220051671 residues Searched:

Total number of hits satisfying chosen parameters: 778172

Minimum DB seg length: 0

Maximum DB seg length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Command line parameters:

-MODEL=frame+ p2n.model -DEV=x1h

Q=/cgn2 1/USPTO spool/US09846589/runat 13012003_094839_7435/app_query.fasta_1.77

-DB=Published Applications NA -QFMT=fastap -SUFFIX=p2n.rnpb -MINMATCH=0.1

-LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62

-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100

-THR MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0

-MAXLEN=2000000000 -USER=US09846589_@CGN_1_1_28_@runat_13012003 094839_7435

-NCPU=6 -ICPU=3 -NO_XLPXY -NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -LONGLOG

-DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6

-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

Database : Published Applications NA:*

1: /cgn2 6/ptodata/2/pubpna/US07 PUBCOMB.seq:*

2: /cgn2_6/ptodata/2/pubpna/PCT NEW PUB.seq:*

3: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*

4: /cgn2 6/ptodata/2/pubpna/US06 PUBCOMB.seq:*

5: /cgn2 6/ptodata/2/pubpna/US07 NEW PUB.seq:*

6: /cqn2 6/ptodata/2/pubpna/PCTUS PUBCOMB.seq:*

7: /cqn2 6/ptodata/2/pubpna/US08 NEW PUB.seq:*

8: /cgn2 6/ptodata/2/pubpna/US08 PUBCOMB.seq:*

9: /cgn2 6/ptodata/2/pubpna/US09 NEW PUB.seq:*

10: /cgn2 6/ptodata/2/pubpna/US09 PUBCOMB.seq:*

11: /cgn2 6/ptodata/2/pubpna/US10 NEW PUB.seq:*

12: /cgn2_6/ptodata/2/pubpna/US10_PUBCOMB.seq:*

13: /cgn2_6/ptodata/2/pubpna/US60_NEW_PUB.seq:*

14: /cgn2_6/ptodata/2/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| | | | | | | SUMMARIES | |
|-----|-----|-------|-------|----------|----|---------------------|-------------------|
| | | | ક | | | | |
| Res | ult | | Query | | | | |
| | No. | Score | Match | Length | DB | ID | Description |
| | 1 | 987.5 | 21 5 | 1399 | 10 | US-09-974-300-1163 | Cognongo 1162 An |
| _ | 1 | | 31.5 | 10636 | | | Sequence 1163, Ap |
| С | 2 | 911 | 29.0 | | 10 | US-09-070-927A-74 | Sequence 74, Appl |
| С | 3 | 873 | | 640681 | 10 | US-09-790-988-1 | Sequence 1, Appli |
| | 4 | 854.5 | 27.2 | 1399 | 10 | US-09-815-242-4732 | Sequence 4732, Ap |
| | 5 | 779 | 24.8 | 1380 | 9 | US-09-738-626-2903 | Sequence 2903, Ap |
| С | 6 | 779 | | 3309400 | | US-09-738-626-1 | Sequence 1, Appli |
| | 7 | 644 | 20.5 | 2068 | 10 | US-09-925-301-65 | Sequence 65, Appl |
| | 8 | 622 | 19.8 | 1212 | 9 | US-09-738-626-1670 | Sequence 1670, Ap |
| | 9 | 453.5 | 14.5 | 749 | 10 | US-09-974-300-5614 | Sequence 5614, Ap |
| | 10 | 406 | 12.9 | 249 | 10 | US-09-923-876-1857 | Sequence 1857, Ap |
| | 11 | 321 | 10.2 | 294 | 10 | US-09-294-093B-1944 | |
| | 12 | 256.5 | 8.2 | 366 | 10 | US-09-960-352-2926 | Sequence 2926, Ap |
| | 13 | 248.5 | 7.9 | 727 | 9 | US-09-895-913A-77 | Sequence 77, Appl |
| C | 14 | 247 | 7.9 | 181 | 10 | US-09-815-242-3450 | Sequence 3450, Ap |
| | 15 | 151 | 4.8 | 1974 | 10 | US-09-815-242-8037 | Sequence 8037, Ap |
| | 16 | 150.5 | 4.8 | 1626 | 10 | US-09-815-242-7219 | Sequence 7219, Ap |
| | 17 | 150.5 | 4.8 | 2040 | 10 | US-09-815-242-9320 | Sequence 9320, Ap |
| | 18 | 147 | 4.7 | 1998 | 10 | US-09-815-242-3878 | Sequence 3878, Ap |
| | 19 | 147 | 4.7 | 2034 | 10 | US-09-815-242-6566 | Sequence 6566, Ap |
| | 20 | 147 | 4.7 | 9589 | 10 | US-09-070-927A-256 | Sequence 256, App |
| | 21 | 145 | 4.6 | 1974 | 10 | US-09-815-242-8915 | Sequence 8915, Ap |
| | 22 | 137.5 | 4.4 | 3574 | 10 | US-09-912-917-1 | Sequence 1, Appli |
| | 23 | 135 | 4.3 | 1960 | 10 | US-09-815-242-4841 | Sequence 4841, Ap |
| | 24 | 134 | 4.3 | 4937 | 12 | US-10-044-090-76 | Sequence 76, Appl |
| | 25 | 130.5 | 4.2 | 8493 | 9 | US-10-071-766-51 | Sequence 51, Appl |
| | 26 | 129.5 | 4.1 | 4286 | 9 | US-09-849-243-14 | Sequence 14, Appl |
| | 27 | 129.5 | 4.1 | 4519 | 9 | US-10-108-605-132 | Sequence 132, App |
| | 28 | 128.5 | 4.1 | 5607 | 9 | US-10-108-605-92 | Sequence 92, Appl |
| | 29 | 128 | 4.1 | 954 | 10 | US-09-837-344-37 | Sequence 37, Appl |
| | 30 | 128 | 4.1 | 988 | 10 | US-09-837-344-34 | Sequence 34, Appl |
| | 31 | 127 | 4.0 | 14800 | 10 | US-09-954-456-1601 | Sequence 1601, Ap |
| | 32 | 126.5 | 4.0 | 1518 | 10 | US-09-815-242-7220 | Sequence 7220, Ap |
| | 33 | 126.5 | 4.0 | 2850 | 9 | US-09-954-531-388 | Sequence 388, App |
| | 34 | 126.5 | 4.0 | 4916 | 10 | US-09-866-108-5 | Sequence 5, Appli |
| | 35 | 126.5 | 4.0 | 7707 | 10 | US-09-866-108-2 | Sequence 2, Appli |
| | 36 | 126.5 | 4.0 | 8117 | 10 | US-09-866-108-1 | Sequence 1, Appli |
| | 37 | 126 | 4.0 | 1791 | 10 | US-09-416-384A-6 | Sequence 6, Appli |
| | 38 | 126 | 4.0 | 4001 | 9 | US-10-098-841-39 | Sequence 39, Appl |
| | 39 | 126 | 4.0 | 6604 | 10 | US-09-880-107-1748 | Sequence 1748, Ap |
| | 40 | 125 | 4.0 | 1310 | 9 | US-09-849-243-13 | Sequence 13, Appl |
| | 41 | 125 | 4.0 | 3263 | 9 | US-09-849-243-15 | Sequence 15, Appl |
| | 42 | 125 | 4.0 | 6386 | 9 | US-10-098-841-40 | Sequence 40, Appl |
| | 43 | 125 | 4.0 | 7497 | 10 | US-09-960-253-175 | Sequence 175, App |
| | 44 | 125 | 4.0 | 7792 | 12 | US-10-044-090-359 | Sequence 359, App |
| | - | | | | | | odaciice 333, App |

OM protein - nucleic search, using frame_plus_p2n model

Run on: January 14, 2003, 00:50:47; Search time 2287 Seconds

(without alignments)

4241.844 Million cell updates/sec

Title: US-09-846-589A-10

Perfect score: 3138

Sequence: 1 TLPCLLSTTPLSPPPPPPQI......MDEPSGTVWRPCEPERSEES 599

Scoring table: BLOSUM62

Xgapop 10.0 , Xgapext 0.5
Ygapop 10.0 , Ygapext 0.5
Fgapop 6.0 , Fgapext 7.0
Delop 6.0 , Delext 7.0

Searched: 16154066 seqs, 8097743376 residues

Total number of hits satisfying chosen parameters: 32308132

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Command line parameters:

-MODEL=frame+_p2n.model -DEV=x1h

Q=/cgn2_1/USPTO_spool/US09846589/runat_13012003_094838_7402/app_query.fasta_1.77

-DB=EST -QFMT=fastap -SUFFIX=p2n.rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0

-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45

-DOCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15 -MODE=LOCAL

-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000

-USER=US09846589 @CGN 1 1 887 @runat 13012003 094838 7402 -NCPU=6 -ICPU=3

-NO XLPXY -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -LONGLOG -DEV TIMEOUT=120

-WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6 -FGAPEXT=7

-YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

Database : EST:*

1: em estba:*

2: em_esthum:*

3: em_estin:*

4: em_estmu:*

5: em estov:*

6: em estpl:*

7: em estro:*

8: em htc:*

9: gb est1:*

10: gb_est2:*

11: gb_htc:*

```
12: gb_est3:*
13: gb_est4:*
14: gb_est5:*
15: em_estfun:*
16: em estom:*
17: gb gss:*
18: em_gss_hum:*
19: em_gss_inv:*
20:
     em_gss_pln:*
21: em_gss_vrt:*
22: em_gss_fun:*
23: em_gss_mam:*
24: em_gss_mus:*
     em_gss_other:*
25:
     em_gss_pro:*
26:
27:
     em_gss_rod:*
```

| Resu | ılt No. | Score | Query Match | Length | DB | ID | Description |
|------|------------|-------|----------------|--------|----|----------|----------------------|
| | 1 | 3138 | 100.0 | 2120 | 11 | AY104190 | AY104190 Zea mays |
| | 2 | 997 | 31.8 | 652 | 14 | BQ465217 | BQ465217 HU02P15r |
| | 3 | 960 | 30.6 | 609 | 10 | AV833385 | AV833385 AV833385 |
| | 4 | 956.5 | 30.5 | 588 | 10 | AW497943 | AW497943 660042A12 |
| | 5 | 952 | 30.3 | 548 | 13 | BM498016 | BM498016 952021B05 |
| | 6 | 920 | 29.3 | 614 | 13 | BM135900 | · BM135900 WHE2619_H |
| | 7 | 919.5 | 29.3 | 643 | 13 | BJ463548 | BJ463548 BJ463548 |
| | 8 | 900 | 28.7 | 581 | 10 | AW065368 | AW065368 614048G07 |
| | 9 | 882 | 28.1 | 522 | 13 | BM428660 | BM428660 952021B05 |
| | 10 | 820 | 26.1 | 535 | 12 | BG411263 | BG411263 EM1_27_F0 |
| | 11 | 808 | 25.7 | 624 | 10 | AW065367 | AW065367 614048G06 |
| | 12 | 793 | 25.3 | 693 | 9 | AL507468 | AL507468 AL507468 |
| | 13 | 783 | 25.0 | 589 | 13 | BJ245810 | BJ245810 BJ245810 |
| | 14 | 781 | 24.9 | 547 | 10 | BE593605 | BE593605 WS1_98_F1 |
| | 15 | 778 | 24.8 | 1887 | 17 | ВН770866 | BH770866 LLMGtag60 |
| | 16 | 767 | 24.4 | 451 | 13 | BM498280 | BM498280 952021B05 |
| | 17 | 763.5 | 24.3 | 595 | 14 | BQ468212 | BQ468212 HP01G15T |
| | 18 | 740 | 23.6 | 600 | 12 | BG521662 | BG521662 13-20 Ste |
| | 19 | 716 | 22.8 | 500 | 14 | BQ839424 | BQ839424 WHE4165_H |
| | 20 | 716 | 22.8 | 629 | 14 | BQ490648 | BQ490648 96-E01178 |
| | 21 | 710 | 22.6 | 478 | 14 | BQ667879 | BQ667879 946101G05 |
| | 22 | 708 | 22.6 | 611 | 12 | BG451468 | BG451468 NF110F10D |
| | 23 | 705.5 | 22.5 | 700 | 9 | AL507494 | AL507494 AL507494 |
| | 24 | 698 | 22.2 | 636 | 10 | AW065483 | AW065483 614058H08 |
| | 25 | 696.5 | 22.2 | 653 | 14 | BQ838563 | BQ838563 WHE2912_A |
| | 26 | 691 | 22.0 | 1798 | 11 | AK009937 | AK009937 Mus muscu |
| С | 27 | 656.5 | 20.9 | 692 | 13 | BJ466496 | BJ466496 BJ466496 |
| | 28 | 649.5 | 20.7 | 6,94 | 10 | AW906351 | AW906351 EST342473 |
| | 29 | 647 | 20.6 | 658 | 12 | BG448141 | BG448141 NF106G06E |
| | 30 | 644 | 20.5 | 718 | 14 | BQ860453 | BQ860453 QGC15M18. |
| | 31 | 642 | 20.5 | 551 | 13 | BM526332 | BM526332 sal40a03. |